Fall 1989

Montana Business Quarterly, Fall 1989

University of Montana (Missoula, Mont.: 1965-1994). Bureau of Business and Economic Research

MONTANA
BUSINESS QUARTERLY
Volume 27, Number 3 Autumn 1989

Montana's Forest Products Industry

A study examining Montanans' attitudes and opinions about the state's forest products industry.

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The *Montana Business Quarterly*, (ISSN 0026-9921) is published in March, June, September and December of each year by the Bureau of Business and Economic Research, and is a service of the University of Montana, Missoula. The subscription rates for the *Quarterly* are $15.00 per year, $25.00 for two years, $35.00 for three years, and $4.00 per issue. Second class postage paid at Missoula, MT 59812. POSTMASTER: Send address changes to the *Montana Business Quarterly*, Bureau of Business and Economic Research, University of Montana, Missoula, MT 59812.

The *Montana Business Quarterly* is available on microfilm from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, MI 49106.

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Bureau of Business and
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The Forest Products Industry: Issues and Responsibilities

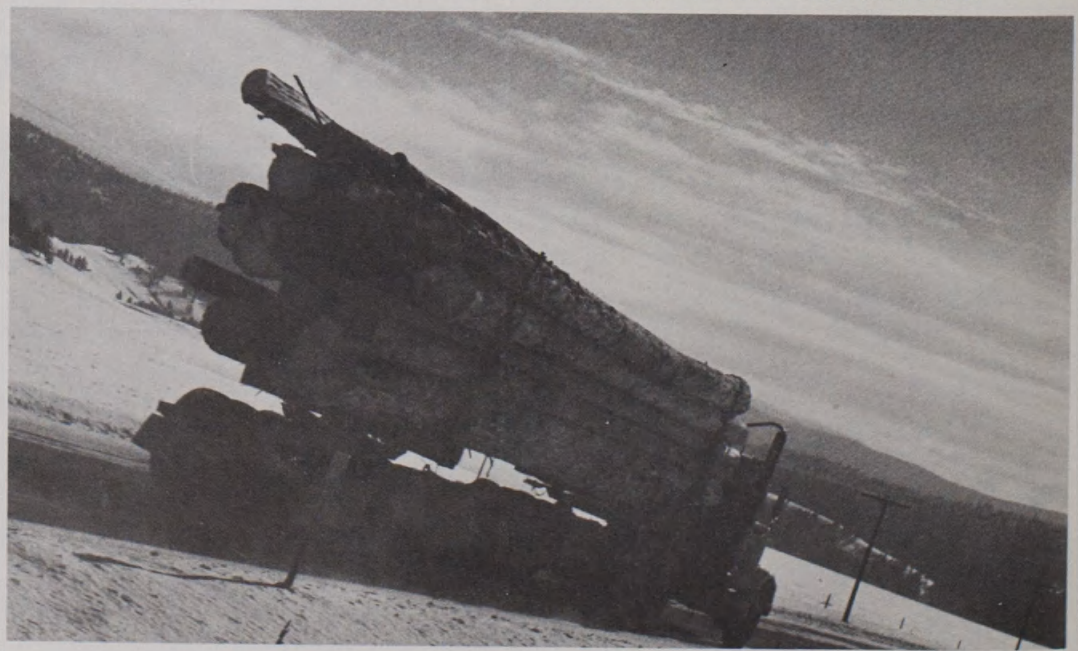
Mary L. Lenihan, Paul E. Polzin, Susan Selig Wallwork, and James T. Sylvester

The forest products industry is the economic mainstay of western Montana, eastern Washington, and the Idaho panhandle. After record-breaking prosperity in the 1970s, the industry experienced several changes in the 1980s. The first few years of this decade included severe setbacks as the nation and the industry reeled from the effects of the 1980-82 recessions. Then, while wood products demand rose in 1984 and 1985, prices remained low due to international competition and other factors. Finally, despite high demand and improving prices in 1986 and 1987, the industry lost jobs due to technological changes that enabled plants to produce more efficiently. In the meantime, smaller plant closures and corporate mergers and buyouts changed some of the industry's regional players. The overall results are an industry quite different from what it was ten years ago.

To assess how the public perceives the industry today, the Bureau of Business and Economic Research conducted an extensive telephone survey in April and May of 1988. The survey examined public attitudes and opinions about the wood products industry and looked at topics such as the industry's obligation to local communities, its forestry practices, and water pollution caused by logging. The Bureau surveyed more than 1,700 residents of western Montana, northern Idaho, and eastern Washington (figure 1) and also interviewed a sample of elected officials in all three areas.

This article summarizes the survey's findings. The text refers to some statistical information that is not included in the figures and tables. More detailed information about the survey results are available from the Bureau.

"The responses . . . established that there is a consensus among residents of the Inland Northwest; they clearly are concerned about jobs and other economic issues."



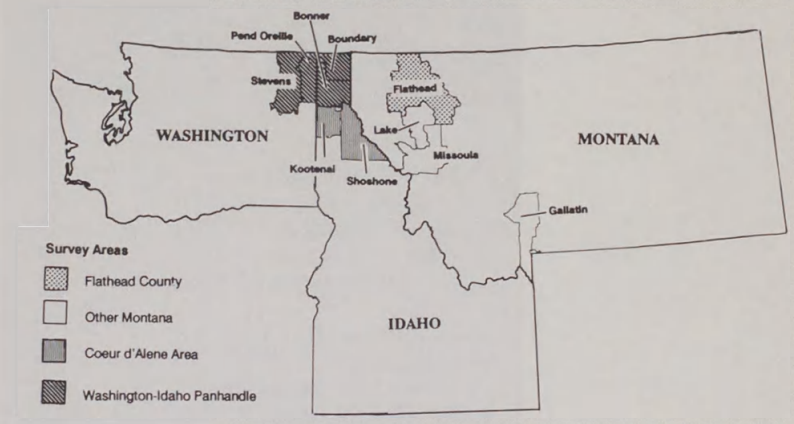
Highlights of the Survey

- Jobs and the economy are considered the number one problem in the Inland Northwest. Pollution, public services, infrastructure, and some local issues are a distant second.
- Those responding to the survey felt wood products companies have a responsibility to protect the environment as well as provide jobs.
- Most respondents said that forest products companies are committed to the local areas, but a sizable minority thought they would rather "cut and leave."
- Most people believe forests are a renewable resource that requires management and a long regrowth period.
- Respondents credit the wood products companies with doing a good job of forest management — even better than government agencies.
- Respondents think that timber is being cut faster than it can be replaced, but were divided as to whether there will always be an adequate supply for local mills.
- Respondents did not think water pollution caused by forest practices is a major problem.
- Respondents believe there are serious conflicts between commercial and recreational uses of the national forests.

General Concerns

To begin the survey, interviewers asked respondents to identify the most important problem in their area. Their responses indicated that jobs and other economic concerns are by far the most important problem (figure 2). Seventy percent of the overall sample gave that response, and even more elected officials (74 percent) answered similarly. Among the area residents, those from the Washington-Idaho panhandle were most likely to name this issue.

Figure 1



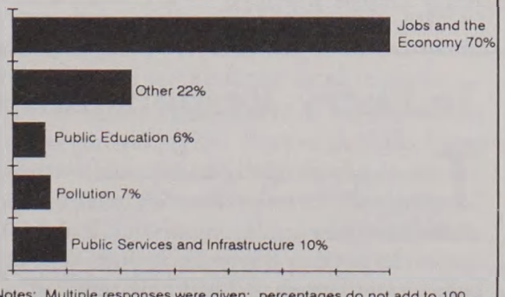
Respondents were less clear when asked to identify the number two problem. Residents of the surveyed Montana counties mentioned pollution; Coeur d'Alene area residents cited public education; and others referred to public services and infrastructure, such as sewers, roads and planning.

Before moving on to more specific questions, the interviewers asked respondents what the term "forest products industry" meant to them. Many gave more than one response, but they mentioned mills, logging, and forest management most frequently. Among those responses, area residents mentioned mills most frequently (35 percent), with logging mentioned by an additional 24 percent. Nearly half the elected officials mentioned logging, with mills the second most frequent response.

The responses to these introductory questions

Figure 2

What do you think is the most important problem facing the area where you live?



Notes: Multiple responses were given; percentages do not add to 100.
This was an open-end question; interviewers did not list possible choices.

Table 1
Ranking of Forest Products Industry Responsibilities

Resident sample [a](n = 1754)	
Protect the environment	2.0
Provide jobs	2.3
Treat workers well	3.0
Pay fair share of taxes	3.2
Support community organizations	4.4
Elected officials [b](n = 121)	
Provide jobs	2.0
Protect the environment	2.5
Treat workers well	2.8
Pay fair share of taxes	3.0
Support community organizations	4.7

NOTE: Rankings were from 1 (most important) to 5 (least important); thus, the lower the average ranking, the more important the item.

[a]Excludes elected officials.
[b]Includes county commissioners, county and city treasurers, state representatives, and state senators.

established that there is a consensus among residents of the Inland Northwest; they clearly are concerned about jobs and other economic issues. The forest products industry provides many, and sometimes most, of the basic industry jobs in the survey areas. Therefore, the attitudes and opinions expressed in the survey are especially significant.

"Inland Empire residents thought the wood products companies in their area are doing a good job managing their forests."

Industry Responsibility

The survey sought to assess public attitudes about the forest products industry's responsibilities to their local communities. It also asked respondents to evaluate the industry's level of commitment to their local communities.

To discover what residents and local officials feel is the forest products companies' most important community responsibility, interviewers read survey respondents a list of items and asked them to rank them from most important to least important. Residents from all geographic areas surveyed responded similarly; they said protecting the environment was the industry's most important responsibility, followed relatively closely by the responsibility to provide jobs (table 1). Treating workers well and paying a fair share of taxes came next, followed more distantly by supporting community organizations.

The ranking order was virtually the same among all resident respondent groups. Older respondents and those from households with a forest products industry employee tended to rank jobs and environmental protection with almost equal emphasis. Younger respondents and those with higher education levels were more pronounced in their ranking of environmental protection as the more important responsibility.

The elected officials who participated in the survey differed somewhat from area residents on this issue. They ranked the industry's responsibility to provide jobs as more important than its responsibility to protect the environment. However, elected officials ranked the other items in the same order as the residents, with roughly similar emphasis.

Elected officials and area residents, then, agreed that providing jobs and protecting the environment are the primary responsibilities of the forest products industry. However, these groups disagreed on which of the two is the top responsibility.

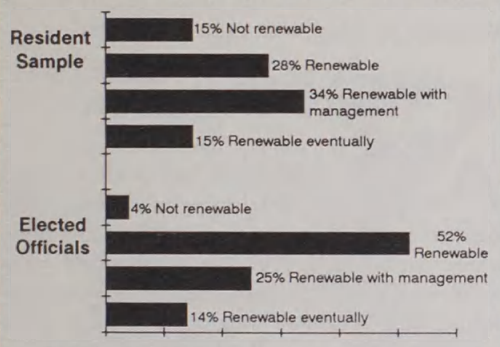
Interviewers asked a separate question to measure the level of forest products industry commitment to their local areas. The question asked specifically whether the respondents felt that the large forest products companies are truly committed to their communities, or if they are interested only in cutting as much timber as they can and then leaving.

About half the area residents surveyed said that the wood products companies are committed to their areas. Another third said the companies are only interested in cutting and leaving.

No single sub-group had a majority which felt that the companies only wanted to cut and leave. However, residents of Montana's Lake, Gallatin, and Missoula counties were more likely to say that the companies are uncommitted

Figure 3

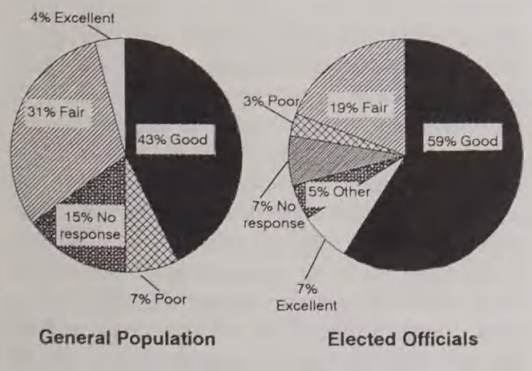
Do you believe that American forests are a renewable resource?



Notes: Multiple responses were given; percentages do not add to 100.
This was an open-end question; interviewers did not list possible choices.

Figure 4

How do you rate the forest management of the wood products firms in your area?



to the area, with 44 percent answering that way and 35 percent saying the companies are committed to their communities. Another group, those earning under $15,000 per year in household income, divided evenly on this issue. Otherwise, all other resident groups had more respondents saying that industry companies are committed than said they weren't.

Elected officials had a more favorable view of the industry. Sixty percent said the forest products companies are truly committed to their communities. Only 24 percent said the companies just want to cut timber and leave.

Renewability and Management

Before asking respondents specifically about forest management in their local areas, the interviewers asked them some general questions about forest renewability. Both elected officials and the public viewed forests as renewable resources, although many recognized the need for management and/or a long regrowth period (figure 3).

The residents surveyed agreed that American forests, in general, are renewable. However, more of them said the forests are renewable with good management practices (34 percent) than simply said they are renewable (28 percent). Elected officials were much more likely to simply say the forests are renewable (52 percent). Another one-fourth said forests are renewable if managed properly.

Very few in both groups said forests are not renewable. Only 4 percent of the elected officials and 15 percent of the general public gave that response.

Survey participants answered a series of questions about forest management. The first asked whether the federal government, the state government, or forest products companies do the best job of managing their forest lands. The general population ranked state government first (30 percent), followed by the forest products companies (26 percent), and the federal government (20 percent).

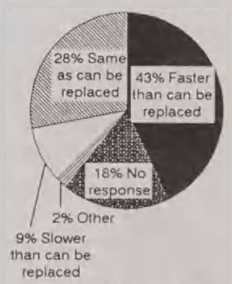
Despite significant differences in land ownership patterns in Idaho, Montana, and Washington, the rankings did not vary among the residents from each state. College students (a small proportion of the total sample) accounted for the only notable difference — they were much more likely to choose state government, and much less likely to choose private industry as the better forest land manager.

The surveyed elected officials felt differently than the general public. They ranked the forest products companies and the federal government almost equally (32 and 31 percent respectively) as the best land manager, followed more distantly by state government (18 percent).

Inland Empire residents thought the wood products companies in their area are doing a good job managing their forests. When asked

Figure 5

How fast is timber being cut in your area?



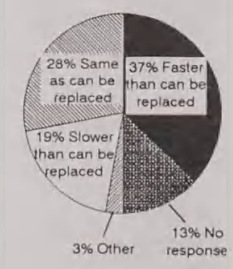
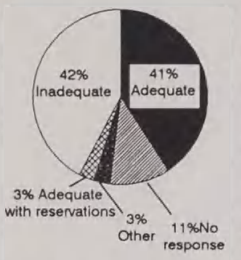
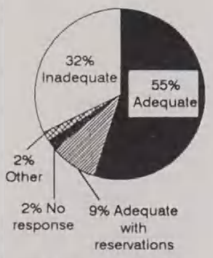


Figure 6
Will there always be enough timber available to keep the mills operating in your area?



General Population



Elected Officials

to evaluate the companies' forest management, nearly half rated it good to excellent, 31 percent said fair, and only 7 percent said poor (figure 4). Elected officials gave the forest products industry even higher ratings.

Turning next to regulations, the most frequent response was that these rules affecting timber cutting on government land should be left alone. One-third of the residents and 38 percent of the elected officials felt that way. An additional 10 percent of the residents and 19 percent of the elected officials preferred even fewer government timber regulations. Even so, one-fourth of the general public and one-fifth of the elected officials preferred stricter regulations.

Responses to the questions concerning forest renewability and management seemed to indicate that residents are fairly middle-of-the-road in their attitudes. The general feeling seemed to be that forests are renewable, that wood products firms are doing a reasonably good job of managing their lands, and that government regulations are adequate. Public perceptions toward the timber supply issue revealed a more critical view, however.

"A substantial proportion of Inland Empire residents feel that recreation and commercial activities are conflicting uses of the natural forests, and that those conflicts are serious."

The survey asked residents and elected officials if timber in their area is being cut faster, at the same rate, or slower than it can be replaced by new growth. Roughly 40 percent of both the residents and the elected officials said timber is being cut faster than it can be replaced (figure 5). About 28 percent of both groups believed it is being cut at a replacement rate.

The survey also asked residents about future timber availability in their area, and responses to this question did not completely correspond with the feeling that timber is being cut too fast. Area residents evenly divided on the issue, with around 40 percent saying there will always be an adequate supply (figure 6). The same proportion disagreed. Elected officials were optimistic about future timber availability. Over half said there will be adequate supplies, and one-third disagreed. Thus, while the most frequent response was that timber is being cut faster than it can be replaced, many of the respondents felt that the future supply will be adequate to keep area mills operating.

Water Pollution

A series of questions revealed what Inland Empire residents think about water pollution, and whether or not logging practices cause water pollution. Interviewers asked area residents if their local forest products companies pollute their region's water. While 42 percent said the companies pollute the water "a lot" or "somewhat," the remaining half said "not too much" or "not at all." Elected officials answered similarly, with a slightly higher proportion showing more concern about pollution (figure 7).

Those who showed concern about water pollution (by saying the industry pollutes a lot or somewhat) then answered a question asking them about current water pollution problems compared with five or ten years ago. One-third of this group said the industry's water pollution problem is less now; 43 percent said it was about the same. Only 21 percent of that group — 8 percent of the entire sample — said the forest products industry pollutes the water more now than it did five or ten years ago.

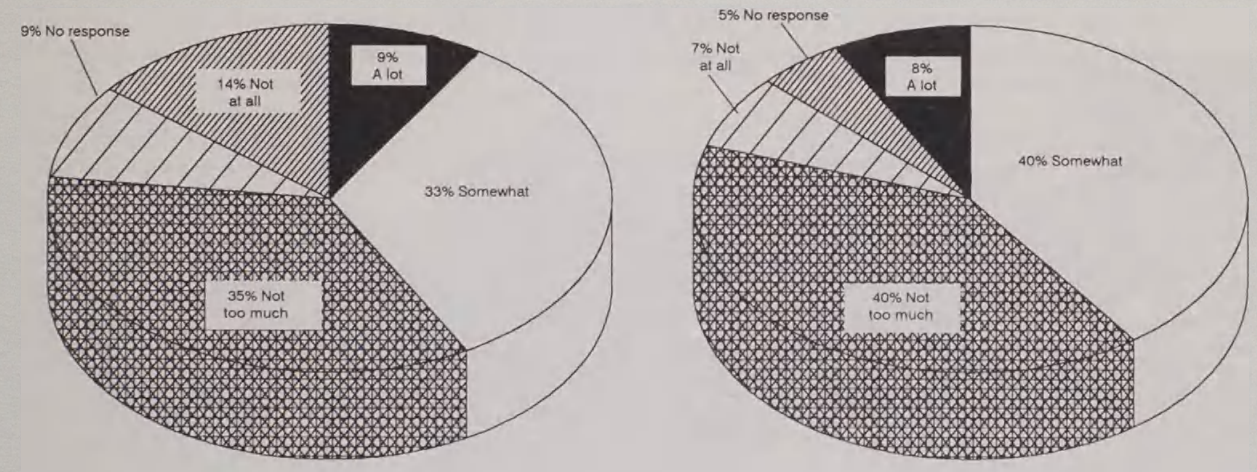
Forest products companies are not extraordinary polluters, respondents said. When asked to compare the water pollution of the forest products industry to that of other industries in the area, only 16 percent of the respondents thought that the industry pollutes area water more. More than two-thirds of both residents and elected officials said the water pollution caused by the forest products industry was the same or less than that of other industries.

Conflicts

The forest products industry is not without controversy, and one section of the survey sought residents' views on two of those issues. The first dealt with timber availability, and the second with conflicts between commercial and recreational uses of the national forests.

Figure 7

Do the logging practices of the forest products companies in your area pollute the water?



General Population **Elected Officials**

Interviewers asked if area residents felt the presence of large forest products firms makes it more difficult for small firms to buy government timber. Half the area residents surveyed said that it does; one-fourth said it makes no difference. A relatively large proportion, about one-fifth, did not express an opinion, perhaps indicating uncertainty or ignorance about this issue (figure 8).

A similar proportion of elected officials felt that large firms make it difficult for small firms to obtain government timber. However, more of them — over a third — said it makes no difference. Fewer were undecided on the issue, which accounts for the difference.

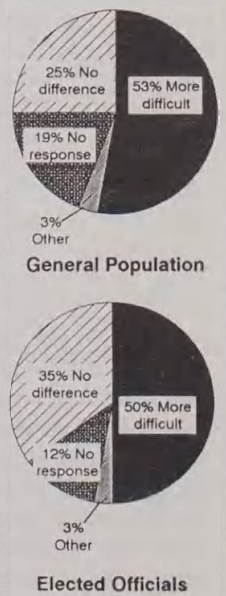
The survey also asked about conflicts between commercial and recreational uses of the national forests. Half the surveyed residents and elected officials said these uses are conflicting. One-third of the residents and 41 percent of the elected officials said the two uses have little or no effect on each other.

Perhaps more revealing is that three-fourths of those who see conflicts perceive them as serious. This was true for both the area residents and elected officials. This translates to 41 percent of all respondents. Thus, a substantial proportion of Inland Empire residents feel that recreation and commercial activities are conflicting uses of the national forests, and that those conflicts are serious. □

Paul E. Polzin, director of the Bureau of Business and Economic Research, served as project director for this study. Mary L. Lenihan, Quarterly editor, administered the day-to-day operations of the survey. Jim Sylvester, Bureau statistician, was in charge of the project's data processing. Susan Selig Wallwork, Bureau research associate, designed the questionnaire. All four worked on the analysis.

Figure 8

Do you think that the presence of large forest products firms makes it more difficult for small firms to buy timber from the government?



Federal Regulation of Hardrock Mining in the National Forests

by Larry D. Swanson

The Northern Region (Region 1) of the U.S. Forest Service has fifteen National Forests and four National Grasslands which are administered by thirteen Forest Supervisors and sixty-six District Rangers. The region encompasses Montana, North Dakota, northern Idaho, and portions of South Dakota and Washington. National Forest System lands cover 25 million acres. These lands include 8 million acres of undeveloped wildlands, 5 million acres of federally-designated wilderness, 22,500 miles of streams, and 1,650 lakes covering more than 217,000 acres. National Forests in the region are managed for timber harvest, grazing, wildlife and recreation, and mineral exploration and development.

The U.S. National Forest System consists of approximately 198 million acres of land. Much of this is concentrated in the western United States. These lands contain much of the nation's remaining deposits of hardrock minerals such as gold, silver, copper, lead, and zinc.

Throughout much of our history, the federal government has not only permitted private exploration and development of valuable minerals on public lands such as these, but has encouraged it with little regulation. However, over the years, a general policy of disposing of public land to spur territorial settlement of a sparsely populated continent has given way to a policy of retaining public land and managing it for an increasingly urbanized population. Making public land freely available to the first who might use it was replaced by a policy of managing public land for multiple uses or more carefully determined special uses. These changes have coincided with growing public concern for the environmental consequences of industrial activity and large-scale, natural resource development.

Spurred by higher metal prices and innovations in mining technology, the hardrock mining industry in Montana is experiencing a resurgence. Metal mining employment in the state doubled the last three years and earnings by metal mining workers increased from $34 million in 1985 to over $81 million in 1988.

These and other changes in national circumstances, needs, and values are reflected in the gradual emergence of a regulatory framework for the management of mining activity in the national forests.

Legislative Framework

Federal laws and regulations affecting mineral exploration and mining on public lands have evolved into somewhat separate and distinct programs for three general classes of minerals:

- **Locatable minerals** or hardrock minerals from which various metals are recovered as well as certain nonmetallic minerals and uncommon mineral materials (such as borax, feldspar, flurospar, and gypsum);
- **Leasable minerals** or various energy producing minerals such as oil, gas, coal and oil shale, and other minerals such as sodium, potassium,

phosphate, and native asphalt; and

- **Salable minerals** or common varieties of sand, stone, gravel, pumice, cinders, and some clays.

Private ownership of locatable mineral deposits discovered on federally-owned lands may be "claimed" if certain requirements are met through a mining claims system. Deposits of leasable minerals may be acquired through a federal mineral leasing system. Deposits of salable minerals may be purchased, usually through competitive bidding.

Federal law governing the exploration and mining of minerals on public lands is derived from legislation enacted over the last hundred years and more. Regulations vary somewhat from one category or type of public land to the next. Major pieces of this legislation having greatest relevance to mineral activity in national forests are:

General Mining Law of 1872 (17 Stat. 91) This act consolidated the federal statutes regarding mining activity on public lands and continued a policy of keeping federal public domain lands "free and open" for private mineral exploration and development. It clarified the legal system for locating and patenting mining claims upon discovery of valuable mineral deposits.

Forest Reserve Act of 1891 (26 Stat. 1103) Authorized the President of the United States to set aside wholly or partly forested public lands as public forest reserves.

Organic Administration Act of 1897 (30 Stat.11) Authorized the U.S. Secretary of Interior to regulate the occupancy and use of national forest reserves and to preserve them from destruction. Recognized the statutorily-sanctioned right of access for miners and prospectors to these lands, provided they "comply with the rules and regulations covering such national forests."

National Forest Act of 1905 (33 Stat. 628) Transferred most authority for managing the national forest reserves from the Department of Interior to the Department of Agriculture (Forest Service) and renamed the forest reserves the national forests.

Mineral Leasing Act of 1920 (41 Stat. 43) Required that deposits of coal, phosphate, oil, oil shale, gas, and sodium on federal lands be acquired through a leasing system rather than through mining claims.

Materials Act of 1947 (61 Stat. 681) Authorized the disposition of common types of minerals found on public lands through competitively-bid, contract sales. Subsequent legislation classified common varieties of sand, gravel, cinders, and pumice as "salable minerals" covered by this act.

Multiple Surface Use Mining Act of 1955 (69 Stat. 367) Limited the rights of located claim holders on public lands to using the surface areas of such claims for mining purposes only. Explicitly made rights of claim holders, prior to issuance of patents, subject to the right of the United States to manage the surface resources on claim sites.

Multiple-Use Sustained-Yield Act of 1960 (74 Stat. 215) Required multiple-use, sustained yield management of renewable resources in national forests with due consideration given to the relative values of various resources in an area. The act did not directly affect the administration of nonrenewable resources, such as minerals on National Forest System lands.

Wilderness Preservation Act of 1964 (78 Stat. 890) Withdrew federally-designated wilderness areas from all forms of mineral appropriation under U.S. mining laws subject to valid claims or rights existing prior to January 1, 1984. Permitted mineral exploration and extraction in conjunction with valid existing claims in wilderness areas, provided these activities are done in ways that preserve wilderness characteristics.

National Environmental Policy Act of 1969 (83 Stat. 852) Required all federal agencies to fully consider the environmental effects of their plans and programs and to identify and pursue less environmentally-damaging alternatives where possible. Required detailed environmental impact statements (EISs) be prepared with public input and review for major federal actions significantly affecting environmental quality.

Mining and Minerals Policy Act of 1970 (84 Stat. 1876) Reasserted a continuing federal policy of fostering and encouraging private enterprise in pursuing the orderly development of domestic mineral resources and in developing an economically sound and stable mining industry.

Forest & Rangeland Renewable Resources Planning Act of 1974 (88 Stat. 476) Directed the assessment of all resources on National Forest System lands to determine the desired level of future production from Forest Service programs. Instructed the Forest Service to consider the impact of mining activities in developing forest management plans.

National Forest Management Act of 1976 (90 Stat. 2949) Required the Forest Service to institute a comprehensive, interdisciplinary planning program for national forest lands, with detailed inven-

tories of lands and resources (including mineral resources).

Federal Land Policy & Management Act of 1976 (90 Stat. 2713) Established procedures for withdrawing public lands from mineral entry and required mineral claims to be filed with appropriate state offices of the Bureau of Land Management (Department of Interior). Explicitly directed the Secretary of Interior to take actions to prevent unnecessary or undue degradation of public lands.

Under the Mining Law of 1872, Congress declared that public lands belonging to the United States shall be "free and open" for private mineral exploration and mining. Private property rights for hardrock minerals on many federal lands are still largely administered by the claims system instituted under this policy.

Private Mineral Rights on National Forest Lands

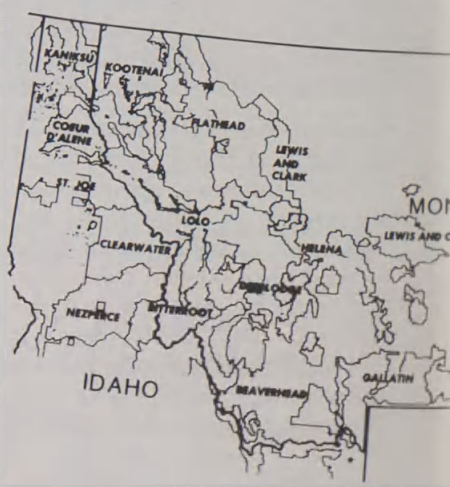
About 140 million of the 198 million acres that constitute the National Forest System are "public domain lands." These were lands already owned by the federal government before being added to the National Forest System by congressional proclamation. They are distinguishable from other national forest lands added to the forest reserve in later years through federal acquisition (referred to as "acquired lands"). Mineral rights on most of these acquired lands are administered under a federal mineral leasing program. However, rights to hardrock minerals on most public domain lands are largely acquired by private individuals and firms through the mining claims system broadly instituted by Congress in 1872.[1]

Under this system, there are two general types of mining claims: "located" claims and "patented" claims. A located claim gives its holder legal title to the mineral resources within a claim's boundaries while the land on the claim remains public land. The claimant is, however, guaranteed reasonable access and use of the site for mining purposes. Locators are required to do at least $100 worth of development work each year in maintaining their rights to a claim.

A patented claim is similar to a fee simple title. It conveys to its holder full ownership of both a claim's mineral resources *and* surface area. In patenting a claim, the discovery of a valuable deposit of minerals must be validated through a mineral examination, at least $500 worth of work toward developing the mineral deposit must be done, and a survey plat on the site must be prepared by a federal mineral surveyor. With these conditions met, the claimant is able to purchase the land for $5 per acre on lode claims and $2.50 per acre on placer claims.

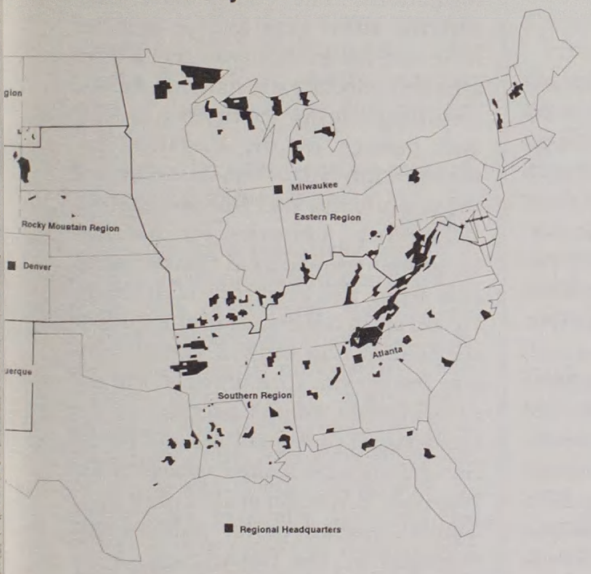
Before a claim can be patented, it first must be located. Locating a claim includes physically marking or staking the boundaries of a claim site, posting a claim notice, and recording the notice with the county in which the claim is located and with a state office of the federal Bureau of Land Management (BLM). Locating a claim in this fashion is formally predicated upon actually discovering a valuable mineral deposit at a particular site. In fact, in order for such a claim to be legally valid, the claimant must be able to produce credible evidence of a bona fide discovery.

In this legal context, making a discovery does not simply mean valuable minerals have been found. It means that a deposit of valuable minerals has been found of sufficient quality and quantity that the site may be developed and mined with reasonable expectation of profiting by doing so.



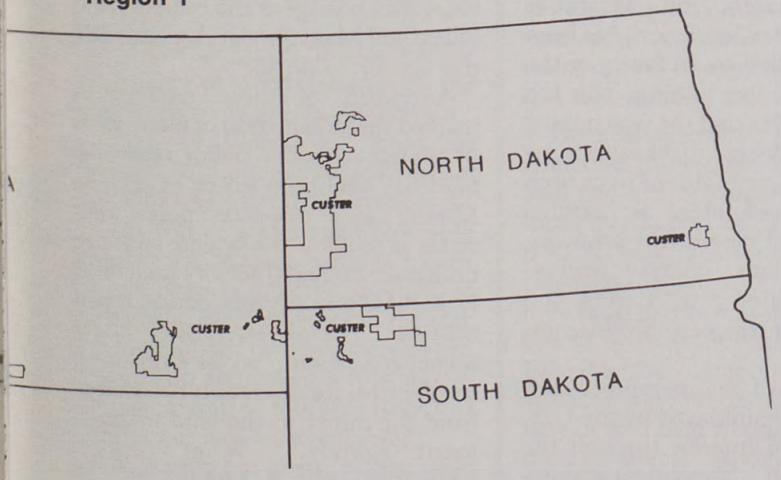
While the law requires that a discovery of this type precede the location of a mining claim in order for the claim to be valid, in practice most claims are located prior to a complete discovery. Much of the time, considerable survey, drilling, and other exploration work is necessary before a discovery is perfected. Hence, prospectors often locate a claim on a promising site prior to formal discovery. By doing so, they receive some legal pro-

S. National Forest System



"The overall purpose of the Forest Service mining regulations for hardrock minerals is to 'minimize adverse environmental impacts' associated with mining activities."

Region 1



Number of Mining Claims and Mineral Activity Under the Forest Service Regulatory Program, National Forests in Region 1

National Forest	—As of April, 1989— Number of claims by Type[1] Lode	Placer	Tunnel	Millsite	Total	—Fiscal 1988— Notices of Intent[2]	Plans of Operation[3]
Beaverhead	5,214	480	10	44	5,748	79	76
Bitterroot	777	35	0	12	824	4	2
Idaho Panhandle	11,592	430	7	32	12,061	100	99
Clearwater	774	302	0	32	1,108	79	34
Custer	2,020	40	0	157	2,214	0	4
Deerlodge	8,612	748	4	47	9,411	26	130
Flathead	109	28	0	0	137	0	0
Gallatin	3,145	124	43	516	3,828	6	14
Helena	7,019	722	3	52	7,796	0	60
Kootenai	10,610	777	16	2,675	14,078	42	15
Lewis & Clark	2,285	91	1	6	2,383	41	10
Lolo	3,543	470	0	28	4,041	34	80
Nezperce	4,837	960	62	20	5,879	83	60
Totals	60,537	5,207	146	3,618	69,508	494	584

Source: U.S. Forest Service, Region 1 Office, Missoula

[1]Lode claims cover veins or seams of mineralized rock in place while placer claims cover superficial deposits of minerals in stream beds or banks or in similar locations. Tunnel site claims are for sites where horizontal excavations are made to reach mineral lodes or veins. Mill site claims are for nonmineral land used in conjunction with mining operations.

[2]Notices filed by mining companies of planned exploration or mining activities in National Forests that may entail some disturbance of surface resources.

[3]Includes both new or revised operating plans approved by the Forest Service for proposed exploration or mining operations that can significantly impact forest resources and the environment.

tection against other prospectors entering the same site while exploration work is underway.

This protection stems from the legal doctrine of *pedis possessio*. Under this common-law doctrine, courts have consistently held that claimants have a superior right to exclusively work a claim site even without a valid discovery, so long as they continue to occupy and work the site in attempting to perfect discovery.

Furthermore, a claimant may never have to formally provide credible evidence of a discovery at the site such as is required under a federal mineral examination. Ordinarily, federal mineral examinations are only conducted if a claimant seeks to patent a claim or if agency personnel are interested in managing a claim site for some use other than mining. In a normal year, only several hundred mining claims are subjected to federal mineral examinations nationwide.[2]

Because of the advantages of locating a claim prior to discovery, it is estimated that only a fraction of the more than 1.5 million mining claims recorded in the western United States may be supportable by valid discoveries. Furthermore, some experts say the majority of claims are protected neither by a discovery or by the doctrine of *pedis possessio*.[3]

As has been noted, mining claims

are often "cheap to locate, cost next to nothing to hold, and provide indefinite tenure."[4] This can result in a proliferation of claims that can "blanket most areas of mineral potential" and create considerable legal confusion in determining the validity of claims and identifying unappropriated land. This greatly hampers the orderly exploration and development of valuable mineral deposits on public lands.[5]

Many located claims that can be backed by valid discoveries are never patented. Procedures for patenting a claim are lengthy and the patenting process may take several years to complete. At the same time, the quantity of minerals on a claim are often relatively small and can be extracted in only a few years' time. Thus, claimants frequently see few advantages in patenting their claims.

A located claim that can be validated by credible evidence of a discovery becomes private property protected under the U.S. Constitution, much as any other form of private property. As stated in a precedent decision by the U.S. Supreme Court, a properly located claim is "property in the fullest sense of that term; and may be sold, transferred, mortgaged, and inherited . . . The owner is not required to purchase the claim or secure patent from the United States; but so long as he complies with the provisions of the mining laws, his possessory right, for all practical purposes of ownership, is as good as though secured by patent."[6]

While surface area ownership remains with the United States, a valid, located claim entitles its owner to mine and remove all of the valuable minerals within the claim. In doing so, the claim holder also is entitled to both reasonable access to the site and use of the surface area of the claim as necessary and appropriate in mining the site.

Limitations on Private Mineral Rights

The Mining Law of 1872 essentially extended an open invitation to private individuals and companies to freely come onto public lands and develop mineral resources when they considered it profitable to do so. However, subsequent legislation, executive action, and court rulings have made this invitation increasingly more qualified.

Many types of minerals such as fossil fuels have been removed from the claims system fostering this "free access and open lands policy" and have been placed under more tightly controlled federal leasing and contract sales programs. Federal legislation to protect the environment, such as clean air, clean water, and hazardous substance control legislation, has been routinely applied to all facets of the economy including mining. This has increasingly restricted the way mining may be conducted. Other mining restrictions or prohibitions have been imposed in such areas as national parks, national monument areas, Indian reservations, military reservations, reclamation project areas, and federal wildlife refuges and wilderness areas.

Still, much of the unappropriated public land administered by the U.S. Department of Interior through the Bureau of Land Management and national forest land administered by the U.S. Department of Agriculture through the Forest Service remains open to hardrock mining. Locating mining claims for hardrock minerals on these federal lands in nineteen western states, including Montana, is still permitted.[7] Perhaps, the greatest limitations placed upon these property rights gained under this claims system stem from congressionally-mandated regulations designed to protect public lands and the environment.

Federal land management agencies did not rush in promulgating these regulations. The courts have consistently ruled that federal agencies have had the authority to regulate all activities affecting the national forests, including mining activity, since 1897 and passage of the Organic Administration Act. The Secretary of Agriculture has had this power since 1905 when authority for national forest management was transferred to him from the Secretary of Interior. However, in adherence to the spirit of the Mining Law of 1872, comprehensive regulations for mining in the national forests weren't adopted by the Department of Agriculture and Forest Service until 1974 after passage of the National Environmental Policy Act. Similar regulations for public lands managed by the Department of Interior weren't adopted until 1980, four years after passage of the Federal Land Policy and Management Act requiring the agency to do so.[8]

Adoption of these regulations marked the culmination of many years of change in public policy regarding hardrock mining on federal lands. The Mining Law's "free-access policy went so far as to allow the private sector to undertake [mineral] activity unilaterally, without any advance notice or permission." However, under these agency regulations, "access is no longer wholly free, for discretion has shifted from the miner to the land management agency."[9] What's more, regulatory control extends to "all aspects of mineral exploration and mining that may involve significant disturbance of the land."

Forest Service Regulatory Program

The overall purpose of the Forest Service mining regulations for hardrock minerals is to "minimize adverse environmental impacts" associated with mining activities. The regulations have three main features:

- *Advance notification* of any mining activity that may disturb forest

resources.

- *Agency approval of mining methods and practices* to minimize any adverse impacts of mining activities on surface resources and the environment.
- *Reclamation* of any surface areas affected by mining activity.

The program essentially works as follows. Anyone planning to conduct some type of mineral activity (including prospecting, exploration, mining, or mineral processing) in a national forest which "might cause disturbance of surface resources" is required to notify the Forest Service before doing so. This "Notice of Intent" must generally describe the nature of the proposed activity and how it will be conducted, and is submitted to the local district ranger for review.

If the district ranger decides that the disturbance of forest resources by the proposed activity may be "significant," a "Plan of Operation" must be prepared and submitted for further evaluation. Greater detail on how the activity will be undertaken and what measures will be taken to minimize any adverse impacts must be provided in these plans. After submission, the plan is then evaluated by Forest Service personnel who approve it if it is acceptable or require modifications or additions if it is unacceptable.

An acceptable plan is one that minimizes any disruption of forest surface resources while also complying with other environmental protection requirements. The proposed operations must comply with applicable federal and state air and water quality standards, which may require other governmental permitting. Standards for disposal and treatment of solid wastes also must be met. This includes the proper handling of mine tailings and other waste materials. The regulations also specifically require operators to take all practicable measures to maintain and protect fisheries and wildlife habitat that may be affected by their activities.

No roads or trails to improve access to exploration or mining areas may be constructed without prior approval by the Forest Service. Any roads that are constructed must be closed after operations are completed, with any bridges or culverts removed and road beds returned to a natural contour and stabilized.

When mining is completed or discontinued at a site, the regulations require that affected areas be reclaimed. Acceptable reclamation includes "practicable" measures (technically and economically feasible measures) necessary to "prevent or control on-site and off-site damage to the environment and forest surface resources." Operators may be required to file bonds before commencing operations to assure that financial resources will be available to carry out this reclamation.

The Forest Service's regulatory program does not provide for public hearings and the opportunity for public input into agency decisionmaking on notices and plans of operation. However, information on proposed mineral activities and operations contained in these notices and plans is available for public examination at district ranger offices (subject to what may be withheld to protect confidential commercial aspects of proposed projects).

Considerable disagreement exists on how far the Forest Service may go in imposing these requirements. While the regulations are well grounded in statute, private prospectors and miners are still afforded the right of access to the national forests and the opportunity to claim and extract valuable deposits of hardrock minerals under the Mining Law and its claims system.

According to the Forest Service, personnel cannot impose requirements that are plainly unreasonable or economically prohibitive. The agency's intent is not to preclude mineral exploration and development in national forests, but rather ensure these activities are conducted in environmentally sound ways and are consistent with overall forest management.

One expert on mining law says that the government can require prospectors and miners to employ certain methods and practices to avoid unnecessary or undue degradation of surface resources, but "so long as operations are conducted in compliance with the regulations, the government has no authority to disapprove a plan of operation."[10] Another legal authority says government regulators may go so far as to "say no in advance to particular activities that would, in their judgment, result in unnecessary destruction of other resources or values."[11]

Besides regulating mining activity as it is proposed by private companies, the Forest Service also may increasingly use its planning process to guide mineral activity in discrete geographical areas before specific projects are proposed. Under the Forest and Rangeland Renewable Resources Planning Act of 1974, the agency is required to develop and periodically update comprehensive land and resource plans for each national forest. These plans can be used to "guide when, where, and under what circumstances the Mining Law will be permitted to operate on specific tracts of federal land."[12]

Mining activity also is heavily regulated in federally-designated wilderness protection areas. Much of the federal land being included in or considered for wilderness designation is in the National Forest System. Federal wilderness protection laws in the past have provided for a grace period of up to twenty years for additional exploration and mineral right appropriation in wilderness areas at the time they are designated. Upon expiration of this grace period, all ex-

isting, valid mineral rights (claims) are "grandfathered" and recognized as legally protected private property rights. The 1964 Wilderness Act provides that valuable minerals associated with these claims may be developed by their owners subject to additional restrictions to protect "wilderness characteristics."

According to Section 4(d)(3) of the Wilderness Act, these restrictions on access to mining operations in wilderness areas must be "reasonable" and "consistent with the use of the land for mineral location and development . . ." Hence, unlike logging, which is strictly prohibited in designated wilderness areas, hardrock mineral exploration and development may be undertaken in these areas, but only under more restrictive and costly conditions.

Conclusion

In administering its regulatory program for mining in the national forests, the Forest Service is attempting to reconcile two vastly differing philosophies regarding public land ownership and management. One is represented by the Mining Law and its laissez faire philosophy of free access, open land, and public land disposition. The other is represented in a growing body of regulatory legislation aimed at much more stringent public land management and environmental protection. As such, periodic reviews of the program by congressional study offices regularly criticize the Forest Service for passive administration and lack of enforcement of its mining regulations.[13]

With demands by competing users of public land and the national forests increasing, there is little likelihood of a retreat in public demands for more effective protection of the national forest resources and environment. Reform of the Mining Law is currently being considered by Congress. While the Mining Law or interpretations of it have been modified many times over the years by legislative, executive, and court actions, it is still viewed by many as fundamentally at odds with modern-day thinking regarding public land management and protection. While many in the hardrock mining industry recognize the need for some reform in the Law, they are understandably fearful of what might be put in its place. Hence, a battle is being hotly waged between mining industry representatives and representatives of major environmental organizations over proposed reforms.

In a commentary on this dispute, John Leshy, an expert on mining law and major contributor to the Mineral Economics and Policy Program of *Resources for the Future* notes:

> The rhetoric employed in the modern debate over Mining Law reform is, in a word, inaccurate. The choice is not, as usually portrayed by environmentalists, one between all-out, unrestrained mineral activity and limited, carefully controlled mining. And it is not, as usually portrayed by industry, one between controlled mining and none at all. Instead, the politically realistic options boil down to a much narrower range of choice. For the industry, it is acquiescing in some loss of leverage in dealing with the government regulators in return for a much more sensible and orderly system of exploration and development. For the environmentalists, it is acquiescing in some continued role for industry initiative in gaining access to federal lands in return for stronger and more forthright environmental safeguards, especially against those who abuse the Law and the landscape.[14]

It is clear that the national forests are highly valued by the American people as both economic resources *and* environmental resources. As such, it is not politically possible or practical to manage them as if they were solely one or the other. □

Citations

1. The Mining Law and applicable regulations appear in Title 43 of the Code of Federal Regulations (CFR) and Title 30 of the U.S. Code Annotated.
2. Terry S. Maley, 1985, *Mining Law from Location to Patent*, Boise, Idaho: Mineral Land Publications, p.525.
3. Maley, p.372.
4. John D. Leshy, 1987, *The Mining Law: A Study in Perpetual Motion*, Washington, D.C.: Resources for the Future, p.78.
5. John D. Leshy, 1988, "Reforming the Mining Law: Problems and Prospects," *The Public Land Law Review*, Vol.9, University of Montana (School of Law), Missoula, p.17.
6. *Wilbur v. U.S. ex rel. Krushnic, 280 US 306 (1930)*.
7. Maley, p.51.
8. Forest Service regulations appear in 36 CFR 228. Department of Interior regulations for mining on BLM-administered lands appear in 43 CFR 3809.
9. Leshy, 1987, p.198.
10. Maley, p.446.
11. Leshy, 1987, pp.198-199.
12. Leshy, 1988, p.21, Forest Service planning regulations are contained in 36 CFR 219.
13. Included in these are studies by the Office of Technology Assessment, U.S. Congress (*Management of Fuel and Nonfuel Minerals in Federal Lands*, Washington, D.C.: Government Printing Office, 1979) and, more recently, the General Accounting Office ("Federal Land Management — The Mining Law of 1872 Needs Revision," Report to the Chairman, Subcommittee on Mining and Natural Resources, Committee on Interior and Insular Affairs, House of Representatives, GAO/RCED-89-72, 1989).
14. Leshy, 1988, pp.13-15.

Larry D. Swanson is director of economic analysis for the Bureau of Business and Economic Research, University of Montana, Missoula.

INTERVIEW

Noritoshi Mabuchi

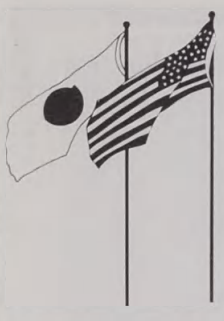
Some Perspectives on Japan's Economic Strength

Noritoshi Mabuchi, a former executive with the Industrial Bank of Japan Ltd., Tokyo, has thirty years of international banking experience, including an assignment as deputy chief representative of that bank in New York City. He has a doctorate in economics from Keio University, Tokyo, and currently serves as professor of finance at Meikai University in Japan.

Noritoshi Mabuchi

A country about the size of Montana, Japan dominates the world with its economic power and has a significant trade surplus with the United States. Before the Meiji restoration in 1868, however, Japan was an agricultural society largely dependent on rice cultivation for its livelihood.

In this interview, Professor Noritoshi Mabuchi discusses Japan's progression from an isolated agricultural society to a world economic leader. Mabuchi, a former executive with the Industrial Bank of Japan Ltd., Tokyo, came to Montana as a visiting practitioner for the University of Montana's Mansfield Center and taught two courses in the UM business school. He will be returning to Japan in September.



Q: Japan succeeded in becoming an industrialized country much earlier than the other Asian nations. What factors contributed the most to Japan's industrialization?

A: The first factor was the level of commercial and industrial development that had already been attained before the Meiji Restoration in 1868. Before then, the Tokugawa Shogunate Government had instituted a policy of seclusionism, which almost completely isolated Japan from contact with the western world. Under this policy, commerce and industry attained a rather high degree of development relative to other Asian countries even though society was still largely based on agriculture. The isolation also helped create the homogeneity that made the Japanese fiercely competitive.

"From the very beginning, Japan started on its road to industrialization because of external factors rather than from domestic momentum. And I must add that this is still true today."

A second factor was the contact Japan had with the West, often symbolized by the visit of the U.S. Commodore Perry to Japan in 1853. This appears to have served as a catalyst in bringing about great changes in the economy of Japan as well as in the Japanese social and political structure. Thus, it might be said that from the very beginning Japan started on its road to modern industrialization because of external factors rather than from domestic momentum. And I must add that this is still true today.

Once momentum had been created, though, industrialization progressed by means of a labor-intensive method and with reliance on Japan's own raw materials, such as silk, among others. There were several other factors involved, including an end to seclusionism and an emphasis on the private sector.

Q: How did abolishing the policy of seclusionism affect Japanese industry?

A: Abolishing the policy of seclusionism opened the country to foreign intercourse, and Japan was compelled to sign unequal treaties which included major restrictions on tariff autonomy. However, Japan made increasingly greater efforts to have such unequal trade treaties revised and was successful in concluding treaties at the end of that century on an essentially equal footing with the great powers of the time. We might say that Japan was fortunate in that it did not experience what India did when the Indian cotton industry was chased from the world market by cotton cloth woven in Manchester.

Q: What role did private industry play in the country's industrialization?

A: At a very early period in the industrialization of the country, just after the Meiji Restoration, the Japanese government was at the forefront of economic development with a number of policy measures that provided for, among other things, the establishment of government-run factories. Toward the end of the nineteenth century, the government gradually changed its economic policy and placed greater emphasis on utilizing private industry. For example, it sold off factories to private enterprises. The government did this because it thought the nation's economy would be more efficiently managed if it were left to the market mechanism. This trend continued until the Japanese economy shifted toward a planned wartime economy in the 1930s.

Q: How did World War II change the Japanese economy?

A: Japan's rapid progress in industrialization after the end of World War II started with the announcement of a series of policy measures

which the Allied Occupation had worked out with a view to democratizing the Japanese economy. First, a land-reform program made the majority of small farmers into independent proprietors, which meant the dissolution of the traditional structure of Japanese feudalistic society that had been dominated by relatively few large landowners. Then, labor unions were fostered and collective bargaining became a right of industrial workers. These measures were aimed at bringing about a more equitable distribution of income. Further expansion of the domestic market resulted, providing a better opportunity for the development of capital-intensive industry which is capable of benefiting from economies of scale. In addition, many corporate owners and executives of the wartime generation were purged from corporations and financial institutions that had been part of so-called "Zaibatsu" groups.

Q: What was the result of "purging" these corporations and financial institutions?

A: As a result, younger managers were able to exercise more modern managerial skills and this contributed a great deal to restore the production and sales of individual companies and to prepare the ground for further industrialization in Japan.

The industrial policy implemented by the Ministry of International Trade and Industry can be regarded as the most important factor in the successful industrialization in Japan after World War II. The Ministry of Finance's regulation of banking and the Bank of Japan's monetary policy worked in conjunction with the industrial policy.

Q: How did Japanese industrialization progress after World War II?

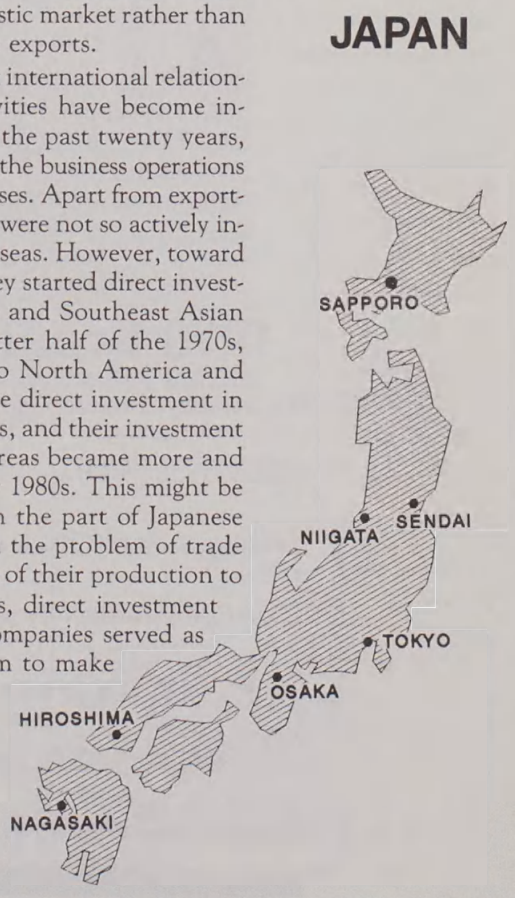
A: In the period of forty years since the end of World War II, the Japanese economy has completed three stages of industrialization, namely, the stages of labor-intensive, capital-intensive, and technology-intensive industrialization.

Q: In what way have these three stages affected the economy?

A: In the latter half of the 1970s, Japan entered a period of remarkable structural change in its economy. First, high economic growth shifted to fairly stable but lower growth. The growth rate of real GNP, which had continued to be over 10 percent annually until the early 1970s, decelerated because of the two oil crises that occurred in that decade. The rate of growth of GNP fell below zero in fiscal 1974, which started April 1974 and ended March 31, 1975. The Japanese economy grew at around the 3 to 5 percent level during the next twelve years, and since 1987 has grown at rates a little above 5 percent. While we expect to continue at this healthy rate, we don't expect a return to those high rates of the sixties. I might add that the recent strong recovery has been due to the expansion of Japan's domestic market rather than an increase in Japanese exports.

A second factor is that international relationships in economic activities have become increasingly important in the past twenty years, particularly in respect to the business operations of multinational enterprises. Apart from exporting, Japanese companies were not so actively involved in operating overseas. However, toward the end of the 1960s, they started direct investment in the East Asian and Southeast Asian regions. Toward the latter half of the 1970s, Japanese firms turned to North America and Western Europe to make direct investment in the high-technology fields, and their investment activities in those two areas became more and more active in the early 1980s. This might be interpreted as efforts on the part of Japanese enterprises to cope with the problem of trade friction by shifting some of their production to advanced nations. Thus, direct investment overseas by Japanese companies served as an opportunity for them to make their operations internationalized and localized in every respect.

Third, the Japanese market became more liberalized. The structure of



the Japanese economy has attained maturity, and industry itself has accumulated more strength. These factors have combined to give the government room to work with less intervention in the domestic market than had previously been the case.

Q: Japanese businesses are often noted for their aggressive attitude toward competition. Why did the Japanese develop the competitiveness that helped them become a world economic leader?

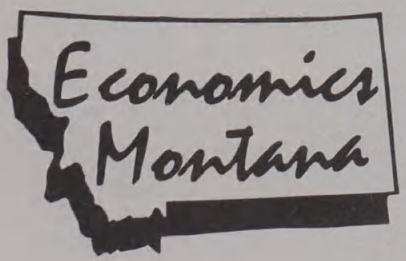
"Japanese people have a strong desire not to lag behind their neighbors. This tendency . . . seems to have come from the tradition of a 'mura' or village-type agricultural society. . . ."

A: Japanese people have a strong desire not to lag behind their neighbors. This tendency found in the Japanese seems to have come from the tradition in a "mura" or village-type agricultural society where every farmer tried hard to achieve a better crop yield than the others. In Japanese society, this tendency is still quite evident, and those engaged in business activities are also greatly interested in the conduct and performance of their competitors. As a result, they have become increasingly involved in severe competition. This keen interest that they had in their competitors was then turned overseas, leading to active efforts on their part to introduce advanced technologies from foreign countries. It is very important to understand that this kind of forward attitude helped Japan greatly when it was fortunate enough to succeed in importing technological know-how from overseas in the 1950s and early 1960s.

Q: What do you foresee for the future of Japan's economy?

A: Japan's economy has now entered a mature phase. Its own businesses can operate on the basis of market discipline, without as much government interference. Also, Japan's own domestic market has grown in recent years. As more foreign corporations enter the Japanese domestic market, it will become more competitive. The concepts of the free market and free competition will be strengthened even further. Therefore, I welcome the entry of more foreign businesses into Japan. □

Growth Expected for Montana's Economy



Montana's economy will grow about 1.7 percent in 1989, bringing some good news to the state after nearly a decade of economic decline, according to Paul Polzin, director of the University of Montana Bureau of Business and Economic Research. Polzin made that projection as part of the Economics Montana forecasting program, cosponsored by the Bureau and U S WEST. To make its economic forecasts for Montana, the Bureau uses national and state statistics compiled from various sources.

"This is only a modest increase by U.S. standards, but it certainly looks good compared to the declines we've experienced in six of the last nine years," Polzin says.

Polzin attributes the projected growth to continued expansion in Montana's mining industries and modest increases in other sectors of the economy, combined with an ending of employment declines in oil and gas exploration and railroads.

"But all bets are off if the long-expected national recession occurs or if there are further plant closures," Polzin says. The longer-term forecasts show continued growth for Montana, but at rates slower than the national average, Polzin says.

Montana's overall economic activity, as measured by non-farm labor income, will increase an average of about 1.5 percent per year during 1990 and 1991, Polzin projects. Comparable figures for the United States are about 2.3 percent per year, he says.

Personal income, one of the major determinants of consumer spending, will increase about 4.9 percent during 1989, Polzin says. This rise may be deceptively rosy, he says, because it will be partially due to the recovery of agriculture from the drought of 1988.

The long-term projections for personal income also show Montana lagging behind the rest of the country, Polzin says. The state's personal income will increase an average of 1.4 percent per year in 1990 and 1991, compared to 1.9 percent per year for the nation, he says.

Montanans can also expect improvements in employment opportunities, Polzin says. Non-farm wage and salary employment will increase by slightly more than 6,000 between 1988 and 1991, he says. In spite of this growth, the number of wage and salary jobs projected for 1991 is only scarcely higher than it was in 1979. □

"This is only a modest increase by U.S. standards, but it certainly looks good compared to the declines we've experienced in six of the last nine years."

These forecasts are part of Economics Montana, a program cosponsored by the University of Montana Bureau of Business and Economic Research and US WEST.

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Table 1
Economic Trends for the U.S. Economy
1985-1991
Actual and Projected as of May 1989

	Actual				Projected		
	1985	1986	1987	1988	1989	1990	1991
Real GNP, percent change	3.4	2.8	3.4	3.9	2.9	1.7	3.2
Inflation (CPI), percent change	3.6	1.9	3.6	4.2	5.1	5.2	4.8
Interest rate, percent							
90-day T-Bills	7.5	6.0	5.8	6.7	8.8	7.8	7.7
Mortgage rate	11.6	10.3	9.3	9.2	10.7	9.9	10.1
Housing starts, millions	1.7	1.8	1.6	1.5	1.4	1.4	1.5
Unemployment rate, percent	7.2	7.0	6.2	5.5	5.5	6.0	5.7

Source: Wharton Econometric Forecasting Associates (May 1989).

Table 2
Employment, Montana 1985-1991
Actual and Projected as of May 1989
(In Thousands)

	Actual				Projected		
	1985	1986	1987	1988	1989	1990	1991
Nonfarm wage & salary jobs	279.3	275.5	275.9	279.0	281.0	282.2	285.3
Mining	6.8	5.8	5.7	6.2	6.8	7.2	7.7
Construction	11.5	10.2	8.6	8.5	8.8	8.8	8.9
Manufacturing	21.8	21.1	21.0	20.8	20.7	20.4	20.3
Wood & paper products	9.4	9.1	9.2	8.9	9.0	8.9	8.8
Other manufacturing	12.4	12.0	11.8	11.9	11.7	11.5	11.5
Transportation & utilities	20.7	20.4	19.6	19.4	19.1	18.7	18.8
Railroads	4.0	3.7	3.4	3.4	3.3	2.9	2.9
Nonrailroads	16.7	16.7	16.2	16.0	15.8	15.8	15.9
Trade	74.6	72.6	72.7	73.0	72.9	73.1	73.5
Wholesale trade	16.6	15.4	14.8	14.7	14.6	14.7	14.9
Retail trade	58.0	57.2	57.9	58.3	58.3	58.4	58.6
Finance, ins. & real estate	13.3	13.1	13.3	13.4	13.5	13.6	13.8
Services	60.6	62.1	65.0	66.9	68.1	69.1	70.6
Government	70.0	70.2	70.0	70.8	71.1	71.3	71.7
Federal (civilian)	12.8	12.7	13.2	13.5	13.6	13.7	13.7
State & local	57.2	57.5	56.8	57.3	57.5	57.6	58.0

Sources: Montana Department of Labor and Industry, Research and Analysis Division; and University of Montana, Bureau of Business and Economic Research, Economics Montana.

Table 3
Personal Income by Major Component, Montana 1985-1991
Actual and Projected as of May 1989

	Millions of Dollars							Millions of 1987 Dollars						
	Actual				Projected			Actual				Projected		
	1985	1986	1987	1988	1989	1990	1991	1985	1986	1987	1988	1989	1990	1991
Total personal income	9,095	9,569	9,948	10,185	11,224	11,885	12,663	9,733	9,999	9,948	9,775	10,253	10,351	10,529
Farm labor income	7	359	453	178	470	450	445	7	375	453	171	429	392	370
Nonfarm labor income	5,945	5,950	6,095	6,419	6,860	7,253	7,763	6,362	6,217	6,095	6,160	6,267	6,317	6,454
Agr. & forestry services	42	37	41	44	50	48	53	45	39	41	42	45	42	44
Mining	234	199	202	229	268	299	341	251	208	202	220	245	260	283
Metal mining	31	38	57	78	99	114	139	33	40	57	75	91	99	116
Coal mining	64	58	55	51	54	58	60	68	61	55	49	49	50	50
Oil & gas extraction	109	78	59	61	71	81	91	117	81	59	59	65	70	75
Nonmetal mining	30	25	31	39	44	47	50	32	26	31	37	41	41	42
Construction	424	420	395	416	442	461	491	454	439	395	399	404	401	409
Manufacturing	552	547	548	558	598	627	660	591	571	548	535	546	546	548
Wood & paper products	252	254	256	259	276	288	302	270	265	256	249	252	251	251
Other manufacturing	300	293	293	299	322	339	358	321	306	293	287	294	295	298
Transportation & utilities	695	678	656	680	722	749	803	744	708	656	652	660	652	668
Railroads	163	149	148	149	153	143	151	174	156	148	143	140	124	125
Nonrailroads	532	529	508	530	569	606	652	569	553	508	509	520	528	542
Trade	1,105	1,062	1,079	1,152	1,237	1,310	1,400	1,183	1,110	1,079	1,105	1,130	1,141	1,164
Wholesale trade	366	344	345	352	385	407	448	392	359	345	338	351	355	373
Retail trade	739	718	734	799	853	903	951	791	750	734	767	779	786	791
Finance, Ins. & real estate	271	278	287	312	341	364	391	290	290	287	300	312	317	325
Services	1,295	1,386	1,492	1,591	1,694	1,804	1,937	1,386	1,448	1,492	1,527	1,547	1,571	1,611
Health	492	529	576	609	650	694	739	527	553	576	584	594	605	614
Nonhealth	803	857	916	982	1,044	1,110	1,198	859	895	916	943	953	967	996
Government	1,326	1,343	1,394	1,438	1,508	1,591	1,687	1,419	1,404	1,394	1,380	1,378	1,386	1,403
Federal	425	425	456	505	532	564	598	455	444	456	485	486	491	497
State & local	901	918	938	932	976	1,028	1,089	964	959	938	895	891	895	906
Adjustments to labor income	-407	-415	-431	-482	-515	-556	-595	-436	-433	-431	-462	-471	-484	-495
Social security contributions	-421	-427	-443	-494	-528	-568	-608	-451	-446	-443	-474	-483	-495	-505
Residence adjustment	14	12	12	12	13	12	13	15	13	12	12	12	11	11
Nonlabor income	3,550	3,675	3,832	4,070	4,409	4,737	5,050	3,799	3,840	3,832	3,906	4,028	4,126	4,199
Dividends, interest & rent	1,908	1,915	1,979	2,095	2,307	2,486	2,653	2,042	2,001	1,979	2,011	2,108	2,165	2,206
Transfer payments	1,642	1,760	1,853	1,974	2,102	2,251	2,397	1,757	1,839	1,853	1,895	1,920	1,961	1,993

Sources: U.S. Department of Commerce, Bureau of Economic Analysis: and University of Montana, Bureau of Business and Economic Research, Economics Montana.

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The Bureau is regularly involved in a wide variety of activities, including economic analysis and forecasting, forest products industry research, and survey research.

The Bureau's Economics Montana forecasting system is an effort to provide public and private decision makers with reliable forecasts and analysis. It is made possible by a generous grant from U.S. West. These state and local area forecasts are the focus of the annual series of Economic Outlook Seminars, cosponsored by the respective Chambers of Commerce in Missoula, Billings, Great Falls, and Helena.

The Bureau also has available county data packages for all Montana counties. These packages provide up-to-date economic and demographic information developed by the Bureau and not available elsewhere.

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